

Claims

- [c1] 1. A computer implemented method for generating a bitmap suitable for high-speed variable printing, comprising the steps of:
- providing a page description language file, the page description language file defining at least one variable data area and at least one static data area;
- interpreting the page description language file, and during the interpreting step, (a) generating a static bitmap of the static data area, (b) identifying the variable data area, and (c) responsive to the identification of the variable data area, not adding a bitmap of the variable data area to the static bitmap; and
- saving the static bitmap, whereby the saved static bitmap is used repeatedly in the generation of a plurality of documents, each of which contain the static bitmap and a variable data bitmap.
- [c2] 2. The computer implemented method of claim 1 further comprising the step of:
- providing a merge file including a plurality of variable data items and including a field name associated with the plurality of data items;

wherein the step of identifying the variable data area during the interpreting step includes the step of detecting, in the page description language file, a character string associated with the variable data area that matches the field name.

[c3] 3. The computer implemented method of claim 2, wherein the detecting step includes the step of identifying the character string bounded by at least one special character.

[c4] 4. The computer implemented method of claim 1, further comprising the step of:
providing a merge file including a plurality of variable data items;
wherein the step of identifying the variable data area during the interpreting step includes the step of detecting, in the page description language file, a character string associated with the variable data area that is operatively linked to the plurality of variable data items.

[c5] 5. The computer implemented method of claim 1, wherein the variable data area includes attribute definitions defining, at least in part, the manner in which variable data is to appear in the variable data area.

[c6] 6. The computer implemented method of claim 5,

wherein the attribute definition defines a list of character glyphs available for use in the variable data area.

[c7] 7. The computer implemented method of claim 5, wherein the attribute definition defines static data to be printed in the event that variable data is not available.

[c8] 8. The computer implemented method of claim 5, wherein the attribute definition defines a justification setting of variable data bitmaps to be printed in the variable data area.

[c9] 9. The computer implemented method of claim 5, wherein the attribute definition defines vertical alignment of variable data bitmaps to be printed in the variable data area.

[c10] 10. The computer implemented method of claim 5, wherein the attribute definition defines a wrapping algorithm for flowing variable data bitmaps in the variable data area.

[c11] 11. The computer implemented method of claim 5, wherein the attribute defines a logic mode for merging the variable data bitmaps with static bitmap data.

[c12] 12. A computer implemented method for generating a static bitmap suitable for high-speed variable printing,

comprising the steps of:

providing a page description language file, the page description language file defining at least one variable data area and at least one static data area;

interpreting the page description language file, and during the interpreting step, generating a static bitmap of the static data area; and

saving the static bitmap, whereby the saved static bitmap is used repeatedly in the generation of a plurality of documents, each of which contain the static bitmap and a variable data bitmap.

- [c13] 13. A computer implemented method for generating a static bitmap suitable for high-speed variable printing, comprising the steps of:
- providing a page description language file, the page description language file defining at least one variable data area and at least one static data area;
- interpreting the page description language file, and during the interpreting step, (a) generating a static bitmap of the static data area, (b) identifying the variable data area, and (c) responsive to the identification of the variable data area, not generating a bitmap of the variable data area; and
- saving the static bitmap, whereby the saved static bitmap is used repeatedly in the generation of a plurality

of documents, each of which contain the static bitmap and a variable data bitmap.

- [c14] 14. A computer implemented method for generating a plurality of bitmaps suitable for high-speed printing, comprising the steps of:
- (a) providing a page description language file, the page description language file defining at least one variable data area and at least one static data area;
 - (b) providing a merge file including a plurality of variable data items;
 - (c) processing the page description language file, and during the processing step, generating a static bitmap of the static data area and associating the variable data area with the plurality of variable data items; and
 - (d) saving the static bitmap;
 - (e) generating a first variable data bitmap of a first one of the variable data items utilizing a graphics state associated with the variable data area;
 - (f) merging the first variable data bitmap with a copy of the static bitmap to produce a first output bitmap;
 - (g) generating a next variable data bitmap of a next one of the variable data items utilizing a graphics state associated with the variable data area; and
 - (h) merging the next variable data bitmap with a copy of the static bitmap to produce a first output bitmap; and

(i) repeating steps (g)–(h) for remaining variable data items in the plurality of variable data items.